REMARKS

Applicants have amended claims 44, 54, 55 and 65 to further clarify those claims in light of the Examiner's comments in the Office Action dated April 10, 2007. As a result, claims 44-65 are pending in the present application. Of these, claims 44, 54, 55 and 65 are independent claims, and the remaining claims depend from those claims. Respectfully, Applicant submits that these pending claims, as amended herein, should be allowed, for the reasons set forth below.

Silence with regard to any of the Examiner's rejections is not an acquiescence to such. Specifically, silence with regard to Examiner's rejection of a dependent claim, when such claim depends from an independent claim that Applicant considers allowable for reasons provided herein, is not an acquiescence to such rejection of the dependent claim(s), but rather a recognition by Applicant that such previously lodged rejection is moot based on Applicant's remarks relative to the independent claim (that Applicant considers allowable) from which the dependent claim(s) depends.

Claim Rejections and the Pending Amendments

A brief review of the history of the pending independent claims 44, 54, 55 and 65 will be helpful in demonstrating why the current amendments place the application in condition for allowance.

Claims 44, 54, 55 and 65 were initially presented for examination in a Response filed on June 2, 2006.

On August 10, 2006 the Examiner rejected them under 35 U.S.C. § 103(a) as being unpatentable over U.S Patent No. 5,737,581 to Keane in view of U.S. Patent No. 5,897,629 to Shinagawa et al.

On December 18, 2006 the undersigned representative of Applicant and the Examiner spoke, and the undersigned attempted to explain the novelty of claims 44, 54, 55 and 65 over Keane and Shinagawa; potential amending language was discussed to clarify the scope of the said claims and thus their novelty over Keane and Shinagawa.

On December 20, 2006 Applicant filed a Response to the pending Office Action setting forth amendments to claims 44, 54, 55 and 65 intended, as had been discussed with the Examiner, to clarify the scope of the claims and establish their novelty over Keane and Shinagawa.

Finally, on April 10, 2007, the Examiner issued the currently-outstanding Office Action, again rejecting independent claims 44, 54, 55 and 65 as unpatentable over Keane in view of Shinagawa. In rejecting the claims, the Examiner stated that

> the features upon which applicant relies [in asserting that Keane and Shinagawa do not show certain features of applicant's invention] are not recited in the rejected claim(s).

Office Action, p. 3.

Specifically, the Examiner stated,

> it appears that the intention of the claim amendments was to set forth the step of business models and business environments/ecosystems dynamically evolving simultaneously, resulting in the fitness test function of the genetic algorithm being based on dynamically changing parameters, as opposed to static parameters throughout the entire genetic algorithm process.

Office Action, pp. 3-4.

The Examiner further stated that

> While the amended claims set forth that there is a competition between models, it does not distinguish [that competition] from the natural competition between models in the genetic algorithm process.

Office Action, p. 4.

The Examiner continued, stating

> The Examiner suggests that the Applicant incorporate language to clearly distinguish that the models being compared belong to an organization's competitors, and are not candidate models of a single organization. The Examiner also suggests that the Applicant incorporate language to make clear that the business problem is also subject to evolution, as both the parameters of the problem and candidate solutions dynamically change, which impact the determination of fitness for evolution.

Office Action, p. 4.

Applicant thanks the Examiner for his comments. The amendments made herein are designed to address the Examiner's comments.

Applicant has amended independent claims 44, 54, 55 and 65 to clarify that these claims all have the following features:

1. In each iteration of the method underlying the claims (specifically, in each repetition of step (c)), a plurality of business models compete. As the Examiner requested, it is further clarified that *this* competition is *marketplace* competition, in a simulated marketplace populated with competing businesses and customers (and, in certain of the claims, suppliers) who may interact with the various businesses. It is further clarified that in this step (c) the plurality of business models involved are acting as marketplace competitors of each other. This clarification results from the addition of the term "marketplace" and the

phrase "in the marketplace" throughout the claims to modify "competition" or to specify where the business models are competing.

2. From iteration to iteration of the method, the business environment changes, due to the change in the characteristics of the competitor business models. Thus, it is clarified that the operational performance of a theoretical unchanged business model in the simulated marketplace/business environment would be different from one iteration to the next, due to the change in the *other* business models with which it is competing in the marketplace. Thus, it is clarified that the business environment is dynamic rather than static. This clarification is evident in the addition of the following language to the claims:

> (e) repeating steps (c) and (d) at least one time, each said repetition of step (c) simulating the plurality of evolvable business models resulting from the previous repetition of step (d), wherein a presence of evolved business models in the said marketplace in the said business ecosystem in a repetition of steps (c) and (d) changes at least one parameter of the said marketplace such that an unchanged business model would achieve a different operational performance in the said repetition of steps (c) and (d) than in the previous performance of the said steps. (added language underlined)

Applicant respectfully suggests that these clarifications of the independent claims respond to the Examiner's statements in the Office Action, and that as a result of these amendments the application is in condition for allowance.

Claim Rejections - 35 U.S.C. § 112

The Examiner rejected claims 44-65 under Section 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter the Applicant regarded as the invention.

In particular, the Examiner stated that the phrase "each having an ability to be in competition with other computer-evolvable business models for solving the said business

problem" was unclear, in that it was unclear whether the competition was "internal," and a strategy was selected within a business ecosystem of a single organization, or whether the competition was "external," and a business strategy was in competition with strategies of other organizations within the business ecosystem.

As discussed above, the independent claims have been amended to clarify that business models compete in *marketplace* competition, in a simulated marketplace populated with competing businesses and customers (and, in certain of the claims, suppliers) who may interact with the various businesses. Thus, the competition is "external" in the Examiner's terms: different business models are representing different firms competing with each other, e.g., for customers, in the marketplace. As discussed above, the amendments thus further clarify that in step (c) of the methods set forth in the independent claims the plurality of business models involved are acting as marketplace competitors of each other. This clarification results from the addition of the term "marketplace" and the phrase "in the marketplace" throughout the claims to modify "competition" or to specify where the business models are competing.

Applicant respectfully suggests that as a result of the amendments made herein, the independent claims particularly point out and distinctly claim the subject matter regarded as the invention, and therefore this application is in condition for allowance.

Claim Rejections - 35 U.S.C. § 103(a)

Applicant believes that the discussion hereinabove of the clarifying effect of the amendments resolves the issue of the patentability of the independent claims over the cited prior art of Keane and Shinagawa, by establishing that the prior art does not disclose all of

the amended claim limitations. However, it may be helpful to recapitulate the arguments previously made by Applicant to establish this fact. In this connection, Applicant also refers the Examiner to the Response filed on December 20, 2006, which response is incorporated herein by reference.

All four of the independent claims were rejected on the basis of the same reasoning. The Examiner recognized that neither Keane nor Shinagawa by itself taught all of the features of limitation (d) of the previous version of claims 44, 54, 55 and 65, including limitation (d)(i):

> (d) generating a next plurality of evolvable business models from the said plurality of evolvable business models by performing an evolutionary method including
>
> (i) for at least one of said evolvable business models, determining said model's fitness based at least in part upon the operational performance of the said evolvable business model in the said business ecosystem containing said plurality of evolvable business models having an ability to be in competition with other evolvable business models, and further containing at least one customer model having an ability to choose to patronize one or more of said plurality of evolvable business models in the said business ecosystem, wherein the said operational performance of the said evolvable business model is affected by at least one evolvable characteristic of one or more other of the said plurality of evolvable business models in the said business ecosystem,

Office Action, pp. 9-13. However, the Examiner stated that limitation (d)(1) was taught by the combination of Keane and Shinagawa, and that it would have been obvious to combine the teachings of Shinagawa with those of Keane. Office Action, pp. 9-13.

In addition, the Examiner stated that Keane taught limitation (e) of the previous version of the independent claims:

(e) repeating steps (c) and (d) at least one time, each said repetition of step (c) simulating the plurality of evolvable business models resulting from the previous repetition of step (d).

Applicant does not concede that the Examiner was correct in his rejections of claims 44, 54, 55 and 65. However, based upon the statements of the Examiner in the pending Office Action, Applicant has amended independent claims 44, 54, 55 and 65 as set forth above to clarify features of those claims, and more fully demonstrate the distinction between those claims and the cited art. Based upon those amendments as made herein, Applicant respectfully suggests that the Examiner should withdraw the rejections for the following reason, which will be explained with reference to the Examiner's discussion of claim 44, but which applies equally to claims 54, 55 and 65 as well.

Respectfully, Applicant suggests that Keane and Shinagawa do *not* teach limitation (d)(i) and limitation (e) as set forth in amended independent claim 44. Independent claim 44 (and claims 54, 55 and 65) as a whole deals with generating business models for solving selected business problems, and in particular is directed at a method for applying genetic algorithms to develop business models. However, *claim 44 adds a particular valuable new feature*, not previously found in such approaches in the prior art: in claim 44 the fitness of a particular evolving business model is not evaluated independent of other evolving models, in a "static" environment; rather it is evaluated in an environment or ecosystem which includes *other* business models, including models with which it may be competing, and which other models *also* are simultaneously evolving in the same dynamic business environment or ecosystem. Because the fitness of evolving models thus is always evaluated taking into account the existence and behavior of other competing, evolving business models in the

ecosystem, the evolution of the models takes into account the simultaneous evolution of other models.

This approach is of unique value. The methods and systems of claims 44, 54, 55 and 65 offer dynamic, rather than static, ecosystems in which the business models are to evolve. That is to say, in the prior art, as a business model evolves over the course of time (or iterations), it does so to optimize its fitness in an external environment that is remaining the same. Thus, the prior art does not take into account that as a business model evolves in the real world, other businesses with which it is competing in the business ecosystem or environment may themselves also evolve, in part in response to the evolution of the very business model itself. Thus, in choosing an optimum solution the prior art fails to take into account the possibility that other competing businesses will adapt to the evolving business model by modifying *their* behavior in response to the evolving business model under study, and that this adaptation and resulting behavior modification in turn can impact the fitness of the evolving model.

The addition of this feature of *dynamic* change is reflected in limitation (d)(i) as amended, and in particular in limitation (e) as amended. Together, these amended limitations provide that the fitness of the evolving business model is determined based at least in part upon its operational performance in a business ecosystem or environment containing other competing evolvable business models as well, *where the performance of the model being evaluated is affected by the evolved characteristics of the other evolving business models in the ecosystem.*

In Shinagawa, by contrast, this feature of dynamic evolution, brought about by evaluating an evolving model's fitness in an environment where the existence and behavior of *other* competing evolving models will affect that model's fitness, is absent. The proposed delivery plans in Shinagawa are evolved in a fixed environment. While the fitness values of a plurality of proposed delivery plans are evaluated, and new plans are generated by genetic operations upon the search strategies, when the fitness of the new plans is determined that fitness does *not* depend on the existence or actions of *other* evolving and competing plans. It follows that Shinagawa does not teach limitations (d)(i) and (e) of amended claims 44, 54, 55 and 65.

Thus, the combination of Keane and Shinagawa does not teach claims 44, 54, 55 and 65, and those claims should be allowed.

Because Applicant's pending amended independent claims 44, 54, 55 and 65 are allowable, Applicant's pending dependent claims 45-53 and 56-64, which depend from those independent claims, are also allowable.

CONCLUSION

In view of the foregoing remarks, Applicant considers the Response herein to be fully responsive to the referenced Office Action, and respectfully submits that the pending claims are in condition for allowance. Early and favorable reconsideration is therefore respectfully solicited.

If there are any remaining issues or the Examiner believes that a telephone conversation with Applicant's attorney would be helpful in expediting the prosecution of this application, the Examiner is invited to call the undersigned at 617-832-1118.

Should an extension of time be required, Applicant hereby petitions for same and request that the extension fee and any other fee required for timely consideration of this application be charged to Deposit Account **No. 06-1448, Reference ICO-701.**

Respectfully submitted,

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